

WHAT IS CLAIMED IS:

1. A thermal activation device for heat-sensitive self-adhesive sheet comprising:

a thermally-activating thermal head for thermally activating a heat-sensitive adhesive layer of a heat-sensitive self-adhesive sheet including a sheet-like substrate formed with a printable surface on one side thereof and with the heat-sensitive adhesive layer on the other side thereof; and

a platen roller for conveying the heat-sensitive self-adhesive sheet in a predetermined direction;

wherein the platen roller comprises adhesive-mass removing means for removing an adhesive mass of the heat-sensitive adhesive adhered to a periphery of the platen roller, and

the adhesive-mass removing means comprises a transfer roller slidably contacting the periphery of the platen roller as located near an exit of the heat-sensitive self-adhesive sheet, thereby allowing the adhesive mass adhered to the periphery of the platen roller to be transferred thereto and a cleaning sheet inserted through space between the transfer roller and the platen roller thereby removing the adhesive mass adhered to a periphery of the transfer roller by allowing the adhesive mass to be transferred thereto.

2. A thermal activation device for heat-sensitive self-adhesive sheet according to claim 1, wherein the cleaning

sheet comprises the heat-sensitive self-adhesive sheet.

3. A thermal activation device for heat-sensitive self-adhesive sheet according to claim 1, wherein the device is constructed in a manner to establish a relation:

$U4 > U3 > U2 > U1$,

where $U1$ denotes a surface energy at the surface of the thermally-activating thermal head, $U2$ denotes a surface energy at the periphery of the platen roller, $U3$ denotes a surface energy at the periphery of the transfer roller, and $U4$ denotes a surface energy of the cleaning sheet at its contact surface with the transfer roller.

4. A thermal activation device for heat-sensitive self-adhesive sheet according to claims 1, wherein the transfer roller has a smaller diameter than that of the platen roller.

5. A thermal activation device for heat-sensitive self-adhesive sheet according to claims 1, wherein the transfer roller is provided with cooling means for cooling the periphery thereof.

6. A thermal activation device for heat-sensitive self-adhesive sheet according to claim 5, wherein the cooling means comprises an air fan coaxially mounted to the transfer roller for applying air flow to the transfer roller.

7. A thermal activation device for heat-sensitive self-adhesive sheet according to claim 5, wherein the cooling means comprises a plurality of hollow portions longitudinally

extended through a roll body of the transfer roller, and an air-intake fan attached to respective one end of the hollow portions.

8. A thermal activation device for heat-sensitive self-adhesive sheet according to claims 5, wherein the cooling means comprises a heat absorbing element disposed in contacting relation with a rotation axis of the transfer roller or with a bearing member for the rotation axis.

9. A printer assembly comprising the thermal activation device for heat-sensitive self-adhesive sheet according to claims 1.

10. A printer assembly according to claim 9, further comprising a thermal head for performing printing as abutted against a heat-sensitive color developing layer of the heat-sensitive self-adhesive sheet having the printable surface formed with the heat-sensitive color developing layer.